UNO Simulation Test Plan

Test Cases

T1:

Purpose: Select playable card from hand.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: B9
- useColorInstead: false

Expected Results:

- B2 is discarded – (dealer.discardCard(B2) called)
- Number of cards in hand is 3 - (player.numberOfCards() is 3)

T2:

Purpose: Pass when no playable card is in hand.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: G7
- Next Card to Draw: RD2
- useColorInstead: false

Expected Result:

- Player draws a card - (dealer.drawCard() called)
- Player passes – (dealer.notifyPass() called)
- Number of cards in hand is 5 - (player.numberOfCards() is 5)

T3:

Purpose: Respond to draw 2 on top of discard pile.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: GD2
- Next Cards to Draw: BS & R7
- Do I Draw is true
- useColorInstead: false

Expected Result:
- Check to see if a card should be drawn - (dealer.doIDraw() is true)
- Top of Discard Pile: GD2 - (dealer.discardCard() not called)
- Two cards drawn – (dealer.drawCard() called twice.
- Player passed – (dealer.notifyPass() called)
- Number of cards in hand is 6 – (player.numberOfCards() is 6)

T4:

Purpose: Respond when a draw 2 is on the top of the draw pile but another player has drawn the two cards.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: GD2
- Next Card to Draw: BS
- Do I Draw is false
- useColorInstead: false

Expected Results:

- Check to see if a card should be drawn – (dealer.doIDraw() called)
- No cards drawn - (dealer.drawCard() not called)
- YD2 discarded – (dealer.discardCard(YD2) called)
- Number of cards in hand is 3 – (player.numberOfCards is 3)

T5:

Purpose: Respond to Wild Draw Four on top of discard pile by drawing.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: WD4
- Next Card to Draw: BS, R7, Y5, G2
- Do I Draw is true
- useColorInstead: false

Expected Result:
- Check to see if a card should be drawn – (dealer.doIDraw() called)
- Top of Discard Pile: WD4 (No card discarded)
- 4 cards drawn – (dealer.drawCard() called 4 times)
- Player passed – (dealer.notifyPass() called)
- Number of cards in hand is 8 – (player.numberOfCards() is 8)

T6:

Purpose: Respond to Wild Draw Four on top of discard pile when previous player drew the 4 cards.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: WD4
- Next Card to Draw: GS, R7, Y5, and G2
- Current Color is Blue
- Do I Draw is false
- useColorInstead: false

Expected Results:

- Check to see if a card should be drawn – (dealer.doIDraw() called)
- Check the current color – (dealer.getCurrent_Color() called)
- No cards drawn – (dealer.drawCard() not called)
- B2 discarded – (dealer.discardCard(B2) called)
- Number of cards in hand is 3 – (player.numberOfCards() is 3)

T7:

Purpose: Respond to Wild Card on top of discard pile-card to play in hand.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: WC
- Next Card to Draw: BS
- Current Color is Blue
- useColorInstead: false

Expected Results:
- Check the current color – (dealer.getCurrent_Color() called)
- Discard B2 – (dealer.discardCard(B2) called)
- No card drawn – (dealer.drawCard() not called)
- Number of cards in hand is 3 – (player.numberOfCards() is 3)

T8:

Purpose: Respond to Wild Card on top of discard pile-no card to play in hand.

Input:

- Hand: R2, R3, B2, YD2
- Top of Discard Pile: WC
- Next Card to Draw: BS
- Current Color is Green
- useColorInstead: false

Expected Results:
- Check the current color – (dealer.getCurrent_Color() called)
- Draw Card: BS – (dealer.drawCard() is called)
- Player passes – (dealer.notifyPass() is called)
- Number of cards in hand is 5 – (player.numberOfCards() is 5)

T9:

Purpose: Report UNO when playing a card leaves a single card in hand.

Input:

- Hand: R2, R3
- Top of Discard Pile: R6
- Next Card to Draw: WC
- useColorInstead: false

Expected Results:
- Red Card discarded (R2 or R3) – (dealer.discardCard() called)
- No card drawn – (dealer.drawCard() not called)
- UNO reported – (dealer.notifyUNO(me) called)
- Number of cards in hand is 1 – (player.numberOfCards() is 1)

T10:

Purpose: Report a win.

Input:

- Hand: R2
- Top of Discard Pile: G2
- Next Card to Draw: WC
- useColorInstead: false

Expected Results:

- R2 discarded – (dealer.discardCard(R2) called)
- No card drawn – (dealer.drawCard() is not called)
- A Win signaled – (dealer.notifyWon(me) is called
- Number of cards in hand is 0 – (dealer.numberOfCards() is 0)

For tests T11 through T12 do not call the play method. Rather call the appropriate player method.

T11:

Purpose: Check the reports their name

Input:

- Hand: R2, R3, B2, YD2

Call the player.whoAreYou method

Expected Result:
- Player's name string

T12:

Purpose: Test the player's report of the score of the cards in their hand.

Input:

- Hand: R2, R3, B2, YD2, WC, WC

Call player.scoreOnCards method

Expected Result:

- A score of 127 is returned